

**RECYCLED WATER INDIVIDUAL PERMIT NO. R- 511181
PLACE ID 143267, LTF 71814**

1.0 AUTHORIZATION

In compliance with the provisions of Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Article 7 and A. A. C. Title 18, Chapter 11, Article 3 and amendments thereto, and the conditions set forth in this permit, Resolution Copper Mining LLC (RCML), located near the Town of Superior, in Pinal County, Arizona is hereby authorized to use industrial reclaimed water for beneficial reuse in accordance with the limitations, monitoring requirements and other conditions set forth in this permit and in the rules cited above.

This permit becomes effective on the date of the Groundwater Protection and Reuse Value Stream Manager's signature and will expire five years thereafter, unless suspended or revoked pursuant to A.A.C. R18-9-A706(D). Conditions established in this permit are designed to protect public health and safety, prevent contamination of groundwater through consumptive water use, and conserve potable water by using reclaimed resources. Water application rates authorized herein do not supersede the requirements of the Arizona Department of Water Resources.

1.1 PERMITTEE INFORMATION

Facility Name: Resolution Copper Mining LLC
Facility Physical Address: 102 Magma Heights
Superior, Arizona 85173

Permittee: Resolution Copper Mining LLC
Permittee Mailing Address: 102 Magma Heights, P.O. Box 1944
Superior, Arizona 85173

Facility Contact: Environmental Manager
Emergency Phone No.: (520) 689-9374

Latitude: 33° 18' 02.7" N **Longitude:** 111° 06' 08.48" W

Legal Description: The Mine Water Treatment Plant is located in Section 35, Township 1 S, Range 12 E of the Gila and Salt River Baseline and Meridian.

1.2 REUSE SITES

The reuse sites are collectively managed by the New Magma Irrigation & Drainage District (NMIDD) and consist of 173 different locations at the time of permit issuance. Notify ADEQ within 30 days of changes to the number of reuse site(s).

Legal Description: The reuse sites are collectively located in Township 3 South, Ranges 7, 8 and 9 East and Township 4 South, Ranges 8 and 9 East of the Gila and Salt River Baseline and Meridian, excluding paved roads and non-irrigated areas.

1.3 AUTHORIZING SIGNATURE

David Dunaway, Manager
Groundwater Protection and Reuse Value Stream
Arizona Department of Environmental Quality

Signed this ____ day of _____, 2018

2.0 RECLAIMED WATER USE

2.1 Legal Description

Applicant/Permittee: Resolution Copper Mining LLC
Mailing Address: 102 Magma Heights, P.O. Box 1944
 Superior, Arizona 85173
Phone: (520) 689-9374

Treatment Facility: Resolution Copper Mining LLC
Physical Address: 102 Magma Heights, P.O. Box 1944
 Superior, Arizona 85173
County: Pinal
Latitude/Longitude: 33° 18' 02.7" N /111° 06' 08.48" W
Cadastral: The Mine Water Treatment Plant is located in Section 35, Township 1 S, Range 12 E of the Gila and Salt River Baseline and Meridian
Facility Contact: Environmental Manager
Phone: (520) 689-9374

Reuse Site: Approximately 10,000 acres of crops including but not limited to alfalfa, barley, Bermuda grass, cotton, sorghum, turf and wheat
Location: The reuse sites are located approximately 27 miles southwest of the Mine Water Treatment Plant.
County: Pinal
Latitude/Longitude: The reuse site center point coordinates were presented in the Application
Cadastral: The reuse sites are collectively located in Township 3 South, Ranges 7, 8 and 9 East and Township 4 South, Ranges 8 and 9 East of the Gila and Salt River Baseline and Meridian, excluding paved roads and non-irrigated areas.
Reuse Site Contact: General Manager
District: New Magma Irrigation & Drainage District
Physical Address: 34630 North Schnepf Road
 Queen Creek, Arizona 85242
Phone: (480) 987-3461

2.2 Source of Reclaimed Water

RCML is an underground mine with operations located in two areas: the East Plant Site and the West Plant Site. The Mine Water Treatment Plant is located on the West Plant Site and is used to treat mine dewatering water from the No. 8 Shaft and Never Sweat Tunnel at the West Plant Site and Nos. 9 and 10 Shafts, located on the East Plant Site. The following waste streams are added to the mine dewatering water:

- From the East Plant Site:
 - Discharges from the Shaft Nos. 9/10 Area Intermediate Rock Stockpile – Regulated by a Type 2.02 General Permit for Intermediate Rock Stockpiles at Mining Sites, No. 511171,
 - Discharges from the Wash Bay and Expanded Wash Bay – Regulated by two Type 3.03 General Permits for Vehicle and Equipment Washes and associated Oil-Water Separator, Nos. 106373 and 511171, and
 - The mine Condenser Cooling Towers and Associated Chiller blowdown.
- From the West Plant Site:
 - Tailings Pond 6 storm water – Regulated by the Area-wide Aquifer Protection Permit No 101703
 - Discharges from the Loadout Intermediate Rock Stockpile, No. 101703
 - Discharges from the Intermediate Rock Stockpile, No. 101703
 - Non-Contact Stormwater from CP-105 (formerly Indian Ponds)

2.3 Reuse Site Description

The mine dewatering water and industrial reclaimed water will be mixed with Central Arizona Project (CAP) water in the Lateral B, C and/or D Conveyances of the NMIDD prior to application, and is applied at consumptive use rates to irrigate crops including but not limited to alfalfa, barley, Bermuda grass, cotton, sorghum, turf, and wheat on fields located on the properties listed in the application. The monitoring requirements and discharge limits for the industrial reclaimed water discharged from the Mine Water Treatment Plant are specified in this Recycled Water Individual Permit. Irrigation with industrial reclaimed water may occur at rates as stated in this permit. The Discharge Limit for flow from the industrial discharges through the Mine Water Treatment Plant to the Direct Reuse Irrigation fields shall not exceed 109,500,000 gallons per month. Total daily flow to the reuse site shall be monitored and recorded. This permit only authorizes the use of reclaimed wastewater for agricultural irrigation as previously described.

The industrial reclaimed water must meet the Aquifer Water Quality Standards for selected metals, volatile organic compounds, semi-volatile organic compounds, and safe-drinking water inorganics as indicated in Table 2 of this permit. Industrial reclaimed water monitoring shall be performed as indicated in Table 2 of this permit.

3.0 PERMIT LIMITS AND MONITORING REQUIREMENTS

3.1 Discharge Monitoring

Resolution Copper Mining is authorized to provide industrial reclaimed water as stated in Section 2.0 of this permit subject to the limitations and monitoring requirements specified in this permit. Compliance sampling of the discharge from the Mine Water Treatment Plant is specified in Table 2 below. Unless otherwise indicated, allowable permit limits are maximum values which shall not be exceeded.

3.2 Monitoring Requirements [A.A.C. R18-9-B703(B)(3) through A.A.C. R18-9-B703(B)(6)]

All monitoring required in this permit shall begin with the initial treatment of industrial waters and continue for the duration of the permit, regardless of the status of the Mine Water Treatment Plant. If the Mine Water Treatment Plant is not discharging to NMIDD during a scheduled quarterly sampling event per Table 2, sampling must resume once the Mine Water Treatment Plant resumes discharging to MNIDD. All sampling, preservation and holding times shall be in accordance with currently accepted standards of professional practice. Trip blanks, equipment blanks, and duplicate samples shall also be obtained, and chain of custody procedures shall be followed in accordance with currently accepted standards of professional practice. Copies of laboratory analyses and chain of custody forms shall be maintained at RCML offices; upon request these documents shall be made immediately available for review by ADEQ personnel.

3.3 Analytical Methodology

All samples collected for compliance monitoring shall be analyzed using Arizona-state approved methods. If no state-approved method exists, then any appropriate EPA-approved method shall be used. Regardless of the method used, the detection limits must be sufficient to determine compliance with the regulatory limits of the parameters specified in this permit. Analyses shall be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification unless exempted under A.R.S. § 36-495.02. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. Analytical methods shall be recorded on the Self-monitoring Report Form (SMRF). A list of Arizona state-certified laboratories can be obtained at the address below:

Arizona Department of Health Services
Office of Laboratory Licensure and Certification
250 North 17th Avenue
Phoenix, AZ 85007
Phone: (602) 364-0720

3.4 Monitoring and Reporting Schedule [A.A.C. R18-9-B703(B)(4)]

Sample collection shall occur according to frequencies listed in Table 2. All monitoring results shall be recorded on the SMRF provided by the Groundwater Protection and Reuse Value Stream following issuance of this permit.

3.4.1 Self-Monitoring Report Form (SMRF)

1. The permittee shall complete the SMRFs provided by ADEQ, and submit the completed report through the myDEQ online reporting system at <http://www.azdeq.gov/welcome-mydeq>.
2. The permittee shall complete the SMRFs to the extent that the information reported may be entered on the forms. If no information is required during a reporting period, the permittee shall enter “not required” on the SMRF, include an explanation and submit the report to Groundwater Protection and Reuse Value Stream.
3. Table 2 list the parameters to be monitored and the frequency for reporting results on the SMRF.
4. The information contained in A.A.C. R18-9-B703(B)(4, 5 & 6) shall be included for a violation of an DL or any other permit condition being reported in the current reporting period.

All violations of a DL or any other permit condition being reported shall be submitted to:
 Arizona Department of Environmental Quality
 Groundwater Protection and Reuse Value Stream
 Mail Code: 5415B-3
 1110 W. Washington Street
 Phoenix, AZ 85007
 Phone (602) 771-4681

Or, when available, through the myDEQ portal accessible on the ADEQ website at:
<http://www.azdeq.gov/welcome-mydeq>

Table 1
Flow Meter and Sample Point Locations

Sampling Point	Latitude	Longitude
Effluent Flow Meter	33° 18' 01.25" N	111° 06' 08.64" W
Effluent Sample Point	33° 18' 01.76" N	111° 06' 08.20" W

Table 2
Water Quality Monitoring and Applicable Limits

Parameter	Discharge Limit	Units	Sampling Frequency	Reporting Frequency
Total Daily Flow ¹	Reserved	MGD ²	Daily (calculation)	Annually
Total Monthly flow	109.5	MGM ³	Monthly (Calculation)	Annually
Alkalinity, Total ⁴	Monitor	mg/l ⁵	Annually	Annually
pH	Monitor	S.U. ⁶	Quarterly	Annually
Specific Conductance	Monitor	umhos/cm ⁷	Quarterly	Annually
Total Dissolved Solids	Monitor	mg/l	Annually	Annually
Chlorine	Monitor	mg/l	Annually	Annually
Sulfate	Monitor	mg/l	Annually	Annually
Antimony, Total	0.006	mg/l	Quarterly	Annually
Arsenic, Total	0.05	mg/l	Quarterly	Annually
Barium, Total	2	mg/l	Quarterly	Annually
Beryllium, Total	0.004	mg/l	Quarterly	Annually
Cadmium, Total	0.005	mg/l	Quarterly	Annually
Chromium, Total	0.1	mg/l	Quarterly	Annually
Copper, Total	Monitor	mg/l	Quarterly	Annually
Fluoride	4.0	mg/l	Quarterly	Annually
Iron, Total	Monitor	mg/l	Annually	Annually
Lead, Total	0.05	mg/l	Quarterly	Annually
Manganese, Total	Monitor	mg/l	Annually	Annually
Mercury, Total	0.002	mg/l	Quarterly	Annually
Nickel, Total	0.1	mg/l	Quarterly	Annually
Selenium, Total	0.05	mg/l	Quarterly	Annually
Thallium, Total	0.002	mg/l	Quarterly	Annually
Zinc, Total	Monitor	mg/l	Quarterly	Annually
Benzene	0.005	mg/l	Annually	Annually
Ethylbenzene	0.7	mg/l	Annually	Annually
Toluene	1	mg/l	Annually	Annually
Total Xylenes	10	mg/l	Annually	Annually
Total Trihalomethanes (TTHMs)	0.1	mg/l	Annually	Annually
Naphthalene	Monitor	mg/l	Annually	Annually

3.4.2 Reporting Deadline

The SMRF report is due by January 30 of the following year.

3.5 Records Retention [A.A.C. R18-9-B703(B)(6)]

Records of all monitoring activities and results (including all original strip chart recording for continuous

¹ Total flow shall be measured using a continuously recording totalizing flow meter and shall be located to gauge the flow from the Mine Water Treatment Plant to the reuse sites as listed as Effluent Flow Meter in Table 1. Flow shall be measured on days when industrial wastewater is delivered from the Mine Water Treatment Plant to the reuse sites.

² Million Gallons per Day

³ Million Gallons per Month

⁴ Water Quality shall be measured at the location listed as Effluent Sample Point in Table 1

⁵ Milligrams per liter

⁶ Standard Unit

⁷ Micromhos per centimeter

monitoring instrumentation, calibration, electronic recording, and maintenance records as applicable) shall be retained for five years from the date of sampling or analysis, whichever is later.

4.0 MANAGEMENT PRACTICES

4.1 Irrigation Practices [A.A.C. R18-9-B702(F)]

Application of industrial reclaimed water to the reuse area shall be performed according to the following requirements:

1. Run-off of industrial reclaimed water from the irrigation area to any surface water body or wash is prohibited. Application of industrial reclaimed water for irrigation is limited to the specific area as indicated in the permit application, and as agreed to by RCML and NMIDD, supporting documentation, and as listed in Section 2.0 of this permit.
2. Use application methods that reasonably preclude human contact with industrial reclaimed water.
3. Limit industrial reclaimed water from standing on open access areas during normal periods of use.
4. Application of industrial reclaimed water to the reuse area may occur at rates as stated in Sections 2.0 and 3.0 of this permit.

4.2 Prohibited Activities [A.A.C. R18-9-B702(H)]

This permit allows the use of industrial reclaimed water solely for the purposes allowed by this permit and as agreed to by RCML and NMIDD. The following activities are prohibited:

1. Irrigating with untreated industrial reclaimed water.
2. Providing or using industrial reclaimed water for any of the following activities:
 - a. Direct reuse for swimming or other full-immersion water activity with a potential of ingestion; or
 - b. Direct reuse for evaporative cooling or misting.
3. Misapplying industrial reclaimed water for any of the following reasons:
 - a. Application of industrial reclaimed water to any area other than a direct reuse site;
 - b. Allowing runoff of industrial reclaimed water or industrial reclaimed water mixed with stormwater from a direct reuse site, except for agricultural return flow that is directed onto an adjacent field or returned to an open water conveyance.

4.3 Public Information [A.A.C. R18-9-B702(I)]

Not Applicable

5.0 COMPLIANCE

5.1 Violations of Discharge Limits and Permit Conditions.

1. The permittee shall notify the Groundwater Protection and Reuse Value Stream in writing within five (5) days of becoming aware of a violation of any permit condition or discharge limitation.
2. The permittee shall submit in a written report to the Groundwater Protection and Reuse Value Stream within thirty (30) days of becoming aware of the violation of any permit condition or discharge limitation. The report shall document all of the following:
 - a. Identification and description of the permit condition for which there has been a violation and a description of the cause;
 - b. The period of violation including date(s) and time(s), if known and the anticipated time period during which the violation is expected to continue;
 - c. Description of any malfunction or failure of pollution control devices or other equipment or processes;
 - d. Any corrective action taken or planned to mitigate the effects of the violation, or to eliminate or prevent a recurrence of the violation;
 - e. Any monitoring activity or other information that indicates that any pollutants would be reasonably expected to cause a violation of an Aquifer Water Quality Standard or cause endangerment to public health and safety; and
 - f. Proposed changes to the monitoring which include changes in constituents or increased frequency

of monitoring.

5.2 Unauthorized Release

The permittee shall notify the Groundwater Protection and Reuse Value Stream within twenty four (24) hours after becoming aware of an unauthorized release of industrial wastewater to the land surface, surface water bodies, or to the aquifer. This notification shall include:

1. A description of the release;
2. A description of the cause of the release;
3. The location and duration of the release including exact date(s) and time(s); and
4. A plan of action which addresses remedial or mitigative action.

5.3 Reporting Location

Notifications of unauthorized releases and violations of discharge limits and permit conditions shall be submitted to:

Arizona Department of Environmental Quality
Groundwater Protection and Reuse Value Stream
Mail Code: 5415B-3
1110 W. Washington Street
Phoenix, AZ 85007
Phone (602) 771-4999

6.0 GENERAL PROVISIONS

6.1 Changes to Facility Information in Section 1.0 and 2.0

The permittee shall notify the Groundwater Protection and Reuse Value Stream in writing within thirty (30) days of any change of facility information including Facility Name, Permittee Name, Mailing or Street Address, Facility Contact Person or Telephone Number and will not necessitate a permit amendment.

6.2 Permit Amendment

The permittee shall request ADEQ authorization sixty (60) days in advance of a significant modification to the recycle system, which would require a permit amendment. A significant modification to the recycle system includes but is not limited to changes regarding the following: reuse category, methods of disposal of excess industrial reclaimed water flow, industrial reclaimed water quality monitoring location(s), monitoring frequency, and wastewater treatment changes which could affect industrial reclaimed water quality. If there is a question as to whether something is considered a significant modification which would require a permit amendment, please contact the following office for a determination:

Arizona Department of Environmental Quality
Groundwater Protection and Reuse Value Stream
Mail Code: 5415B-3
1110 W. Washington Street
Phoenix, AZ 85007
Phone (602) 771-4999

6.3 Permit Transfer [A.A.C. R18-9-A705(B)]

The permittee may transfer this permit to another person if the following conditions are met:

1. Permittee notifies the Director of the proposed transfer.
2. Permittee submits a written agreement containing a specific date for the transfer of permit responsibility and coverage between the current permittee and the proposed new permittee, including an acknowledgment that the existing permittee is liable for violations up to the date of transfer and that the proposed new permittee will be liable for violations from that date forward.

3. The following information for the new proposed permittee shall be provided in the notice:
 - a. Name, title, mailing address, and telephone number;
 - b. If applicable, the name, title, mailing address, and telephone number of the authorized contact person for the permittee; and
 - c. If applicable, a copy of the certificate of disclosure of violations required under A.R.S. § 49-109.
4. If the permittee requests to amend the permit document to reflect the change in ownership, the appropriate fee must be submitted along with the permit transfer request (see A.A.C. R18-14-103).
5. All correspondence regarding permit transfer should be made to the ADEQ address listed in Section 6.2 of this permit.

6.4 Duty to Comply [A.R.S. §§ 49-221 through 49-263]

The permittee is notified of the obligation to comply with all conditions of this permit and all applicable provisions of A.R.S. § Title 49, Chapter 2, Articles 1, 2 and 3, A.A.C. Title 18, Chapter 9 and A.A.C. Title 18, Chapter 11, Article 3. Any permit non-compliance constitutes a violation and is grounds for an enforcement action pursuant to A.R.S. § Title 49, Chapter 2, Article 4 or permit amendment, suspension, or revocation.

6.5 Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby. The filing of a request by the Permittee for a permit action does not stay or suspend the effectiveness of any existing permit condition.

6.6 Other Laws and Rules

The issuance of this permit does not waive any federal, state, county, or local government rules, regulations, or permits with which this facility may have to comply.

6.7 Permit Reissuance [A.A.C. R18-9-B703(A)(2 and 3)]

This permit shall expire five (5) years from the date of signature. Permittee shall file an application for reissuance at least 60 days before the expiration of this permit. The terms and conditions of an expired permit are automatically continued pending issuance of a new permit if:

1. The permitted activity is of a continuing nature.
2. Permittee has submitted a timely (60 days before expiration date of permit) application for a new permit.
3. ADEQ is unable, through no fault of the permittee, to issue a new permit before the expiration date of the previous permit.

7.0 REFERENCES AND PERTINENT INFORMATION

The terms and conditions set forth in this permit have been developed based upon the information contained in the following, which are on file with the Department:

1. Industrial Individual Recycled Water Permit Application dated June 6, 2018.
2. Public Notice dated July XX, 2018.
3. Public Hearing date: August XX, 2018.

